

1 **Amendment to the Claims**

2 **In the Claims:**

3 Please amend Claims 1, 4, 21, 27, 52, and 53, and add new Claims 54-58 as follows:

4 1. (Currently Amended) A medical simulator for training ultrasound operators to perform
5 ~~craniosynostosis~~ craniosynostosis screenings using medical ultrasound, comprising a substantially life
6 size model of a human head, said model being at least in part fabricated from a first material, said
7 model including at least one simulated patent skull suture being at least in part fabricated from a
8 second material, said second material comprising at least one of a solid and a semi-solid, an
9 echogenicity of said second material being substantially different than an echogenicity of said first
10 material, such that each simulated patent skull suture can be readily distinguished in an ultrasound
11 image of said model.

12 2. (Previously Presented) The medical simulator of Claim 1, wherein each simulated patent
13 skull suture comprises an opening formed in said first material, such that the second material at least
14 partially fills the opening.

15 3. (Cancelled)

16 4. (Currently Amended) The medical simulator of Claim 1, wherein the second material is
17 hypoechoic relative to the first material.

18 5. (Previously Presented) The medical simulator of Claim 1, wherein the echogenicity of the
19 second material is lower than the echogenicity of the first material, such that in an ultrasound image
20 of the model, portions of the model corresponding to the first material appear relatively bright and
21 portions of the model corresponding to the second material appear relatively dark.

22 6. (Previously Presented) The medical simulator of Claim 1, wherein the model includes a
23 scalp portion in which each simulated skull suture is disposed, such that the scalp portion of the
24 model is covered with a layer of the second material, the second material extending beyond the
25 opening in the first material and covering at least a portion of the first material, to prevent the
26 simulated patent skull suture from being identified tactilely.

27 7. (Previously Presented) The medical simulator of Claim 1, wherein the second material
28 comprises a mixture of a starch and a glue.

29 8. (Original) The medical simulator of Claim 7, wherein the glue is a casein-based glue.

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9. (Original) The medical simulator of Claim 7, wherein the glue is a synthetic resin-based glue.

10. (Original) The medical simulator of Claim 2, wherein at least one simulated patent skull suture corresponds to at least one of a simulated patent coronal skull suture and a simulated patent lambdoid skull suture, and wherein each opening corresponding to a simulated patent coronal skull suture is beveled, and each opening corresponding to a simulated patent lambdoid skull suture is beveled.

11. (Original) The medical simulator of Claim 2, wherein at least one opening corresponding to a simulated patent skull suture corresponds to at least one of a simulated patent sagittal skull suture and a simulated patent metopic skull suture, so that opposed walls of each opening corresponding to a simulated patent sagittal skull suture exhibit an end-to-end configuration, and opposed walls of each opening corresponding to a simulated patent metopic skull suture exhibit an end-to-end configuration.

12. (Previously Presented) The medical simulator of Claim 1, further comprising at least one simulated fused skull suture.

13. (Original) The medical simulator of Claim 12, wherein each simulated fused skull suture comprises said first material.

14. (Original) The medical simulator of Claim 12, wherein each simulated fused skull suture comprises an opening formed in said first material, each opening corresponding to a simulated fused skull structure being filled with a third material, an echogenicity of the third material being substantially distinguishable from the echogenicity of the second material, so that each opening corresponding to a simulated fused skull suture can be readily distinguished from an opening corresponding to a simulated patent skull suture in an ultrasound image of said model.

15. (Original) The medical simulator of Claim 14, wherein the echogenicity of the third material is substantially similar to the echogenicity of the first material, such that in an ultrasound image of the model, portions of the model comprising the first material are not readily distinguishable from portions of the model comprising the third material.

16. (Original) The medical simulator of Claim 14, wherein the third material comprises a synthetic elastomer.

17. (Original) The medical simulator of Claim 16, wherein the synthetic elastomer comprises dimethyl siloxane, hydroxy-terminated polymers, and silica.

1 18. (Original) The medical simulator of Claim 12, further comprising an opaque layer
2 configured to cover each simulated patent skull suture and each simulated fused skull suture, so that a
3 trainee cannot readily visually determine whether a specific skull suture is patent or fused by visually
4 inspecting the model.

5 19. (Original) The medical simulator of Claim 1, further comprising an opaque layer
6 configured to cover a scalp portion of the model, so that a trainee cannot readily visually locate each
7 simulated patent skull suture by visually inspecting the model.

8 20. (Original) The medical simulator of Claim 1, wherein a doll's head is utilized for the
9 substantially life size model of a human head.

10 21. (Currently Amended) A medical simulator adapted to be used to train ultrasound
11 operators to perform ~~craniosynotosis~~ craniosynostosis screenings using medical ultrasound,
12 comprising a substantially life size model of a human head, said model including at least one opening
13 corresponding to a simulated patent skull suture, each such opening being filled with a solid or semi-
14 solid hypoechoic material to enhance a difference in an echogenicity of the simulated skull suture
15 relative to that of portions of the model not corresponding to the simulated patent skull suture, the
16 difference enabling each simulated patent skull suture to be identified in an ultrasonic image.

17 22. (Previously Presented) The medical simulator of Claim 21, wherein when the medical
18 simulator is imaged using ultrasound, the hypoechoic material produces a relatively dark image,
19 whereas adjacent portions of the model produce a relatively bright image, such that each simulated
20 patent skull suture appears in the ultrasound image as a relatively dark area surrounded by relatively
21 brighter areas.

22 23. (Previously Presented) The medical simulator of Claim 21, wherein said model is
23 fabricated from a first material, such that the solid hypoechoic material filling each opening
24 corresponding to a simulated patent skull suture represents a second material, an echogenicity of the
25 second material being substantially different than the echogenicity of the first material, so that each
26 opening corresponding to a simulated patent skull suture can be readily distinguished from the first
27 material in an ultrasound image of said model.

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24. (Previously Presented) The medical simulator of Claim 23, wherein the echogenicity of the second material is lower than the echogenicity of the first material, such that in an ultrasound image of the model, portions of the model comprising the first material will appear relatively bright, while portions of the model comprising the second material will appear relatively dark.

25. (Original) The medical simulator of Claim 23, further comprising at least one opening corresponding to a fused skull suture, each opening corresponding to a simulated fused skull suture being filled with a third material, an echogenicity of the third material being substantially different than the echogenicity of the second material, so that each opening corresponding to a simulated fused skull suture can be readily distinguished from an opening corresponding to a simulated patent skull suture in an ultrasound image of said model.

26. (Original) The medical simulator of Claim 21, wherein:

(a) each opening corresponding to a simulated patent skull suture intended to represent a patent coronal skull suture is beveled;

(b) each opening corresponding to a simulated patent skull suture intended to represent a patent lambdoid skull suture is beveled;

(c) each opening corresponding to a simulated patent skull suture intended to represent a patent sagittal skull suture is formed such that opposed walls of the opening exhibit an end-to-end configuration; and

(d) each opening corresponding to a simulated patent skull suture intended to represent a patent metopic skull suture is formed such that opposed walls of the opening exhibit an end-to-end configuration.

27. (Currently Amended) An ultrasound trainer configured to train ultrasound operators to perform ~~craniosynotosis~~ craniosynostosis screenings using medical ultrasound; comprising a substantially life size model of a human head, said model including at least one simulated patent skull suture and at least one simulated fused skull suture, an echogenicity of each simulated patent skull suture enabling the simulated patent skull suture to be readily distinguishable from each simulated fused skull suture in an ultrasound image of said model, such that each simulated patent skull suture will appear dark in such an ultrasound image, and each simulated fused skull suture will appear bright in such an ultrasound image.

Claims 28-51. (Canceled)

52. (Currently Amended) A medical simulator for training ultrasound operators to perform ~~craniosynotosis~~ craniosynostosis screenings using medical ultrasound, comprising a substantially life-size model of a human head, said model including two eyes, a mouth, two ears, and at least one simulated patent skull suture, an echogenicity of each simulated patent skull suture enabling the simulated patent skull suture to be readily distinguishable in an ultrasound image of said model.

53. (Currently Amended) A medical simulator for training ultrasound operators to perform ~~craniosynotosis~~ craniosynostosis screenings using medical ultrasound, comprising a substantially life size model of a human head, said model including at least one simulated patent skull suture, an echogenicity of each simulated patent skull suture enabling the simulated patent skull suture to be readily distinguishable in an ultrasound image of said model, such that each simulated patent skull suture will appear dark in such an ultrasound image, whereas adjacent portions of said model will appear bright in such an ultrasound image.

54. (New) A medical simulator for training ultrasound operators to perform craniosynostosis screenings using medical ultrasound, comprising a substantially life size model of a human head, said model being at least in part fabricated from a first material, said model including:

(a) at least one simulated patent skull suture being at least in part fabricated from a second material, said second material comprising at least one of a solid and a semi-solid, an echogenicity of said second material being substantially different than an echogenicity of said first material, such that each simulated patent skull suture can be readily distinguished in an ultrasound image of said model; and

(b) at least one simulated fused skull suture, wherein each simulated fused skull suture comprises an opening formed in said first material, each opening corresponding to a simulated fused skull structure being filled with a third material, an echogenicity of the third material being substantially distinguishable from the echogenicity of the second material, so that each opening corresponding to a simulated fused skull suture can be readily distinguished from an opening corresponding to a simulated patent skull suture in an ultrasound image of said model.

55. (New) The medical simulator of Claim 54, wherein the echogenicity of the third material is substantially similar to the echogenicity of the first material, such that in an ultrasound image of the model, portions of the model comprising the first material are not readily distinguishable from portions of the model comprising the third material.

56. (New) The medical simulator of Claim 54, wherein the third material comprises a synthetic elastomer.

57. (New) A medical simulator adapted to be used to train ultrasound operators to perform craniocystosis screenings using medical ultrasound, comprising:

(a) a substantially life size model of a human head, said model including at least one opening corresponding to a simulated patent skull suture, each such opening being filled with a solid or semi-solid hypochoic material to enhance a difference in an echogenicity of the simulated skull suture relative to that of portions of the model not corresponding to the simulated patent skull suture, the difference enabling each simulated patent skull suture to be identified in an ultrasonic image, said model being fabricated from a first material, such that the solid hypochoic material filling each opening corresponding to a simulated patent skull suture represents a second material, an echogenicity of the second material being substantially different than the echogenicity of the first material, so that each opening corresponding to a simulated patent skull suture can be readily distinguished from the first material in an ultrasound image of said model; and

(b) at least one opening corresponding to a fused skull suture, each opening corresponding to a simulated fused skull suture being filled with a third material, an echogenicity of the third material being substantially different than the echogenicity of the second material, so that each opening corresponding to a simulated fused skull suture can be readily distinguished from an opening corresponding to a simulated patent skull suture in an ultrasound image of said model.

58. (New) A medical simulator adapted to be used to train ultrasound operators to perform craniocystosis screenings using medical ultrasound, comprising a substantially life size model of an infant head, said model including at least one opening corresponding to a simulated patent skull suture, each such opening being filled with a solid or semi-solid hypochoic material to enhance a difference in an echogenicity of the simulated skull suture relative to that of portions of the model not corresponding to the simulated patent skull suture, the difference enabling each simulated patent skull suture to be identified in an ultrasonic image.